

# PUBLIC JUSTICE

RIGHTING WRONGS

September 26, 2012

President and Chief Executive Officer  
AES Corp.  
4300 Wilson Boulevard  
Arlington, VA 22203

*Via Certified Mail, Return Receipt Requested*

President and Chief Executive Officer  
AES Puerto Rico, Inc.,  
Carretera # 3, KM 142.0  
Bo. Pte Jobos  
Guayama, Puerto Rico 00784

*Via Certified Mail, Return Receipt Requested*

Manuel Matta  
AES Puerto Rico, L.P.,  
Director  
Carretera #3, KM 142.0  
Bo. Pte Jobos  
Guayama, Puerto Rico 00784

*Via Certified Mail, Return Receipt Requested*

RE: ***Notice of Intent to Sue AES Corporation (and local affiliates) for  
Violations of the Resource Conservation and Recovery Act Involving  
Uncontrolled Disposal of Coal Ash Waste Generated at the AES Coal-  
fired Power Plant in Guayama, Puerto Rico***

Dear Sirs:

We are writing on behalf of the Comité Diálogo Ambiental, Inc. (“Citizens”)<sup>1</sup> to provide you with notice of their intent to file suit against AES Corp. and relevant subsidiaries (“AES”) for ongoing violations of the Resource Conservation and Recovery Act (“RCRA”)<sup>2</sup> resulting from disposal of waste coal ash from the AES Coal-fired Power Plant in Guayama, Puerto Rico (the “Plant”). As is more fully explained

below, AES is violating RCRA by disposing of waste coal ash (“Waste”) from its Guayama plant in a manner that may present an imminent and substantial endangerment to health and the environment and is also violating RCRA’s prohibition of open dumping by placing Waste into flood plains without taking appropriate precautions to

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<sup>2</sup> 42 U.S.C. § 6901 et seq.

avoid erosion of the Waste into local streams and to protect people from contact with the Waste. At present, AES disposes of Waste from the Plant by labeling it “Agremax” and providing it to contractors it to be used for road surfacing, as fill material for residential and commercial construction projects, and just to be dumped for no specific purpose.<sup>3</sup> AES even advocates use of the Waste as an agricultural soil amendment. *Id.* The Waste dumped into the environment in an uncontrolled manner is a solid waste that is notorious for contaminating ground and surface waters with toxic pollutants and may be the subject of an EPA rulemaking in the near future. The uncontrolled disposal of coal ash is harmful to the environment, threatens the health of local communities, may contaminate groundwater, and is already directly polluting rivers and streams. A recent peer-reviewed study by government scientists has found that the combined direct and indirect costs of fish and wildlife being poisoned by coal ash disposal is over \$2.3 billion nationally.<sup>4</sup>

By failing to comply with the environmental laws detailed in the preceding paragraph, AES has injured or threatened to injure, and will continue to injure or threaten to injure, the health, environmental, aesthetic, and economic interests of Citizens. These injuries or risks are traceable to AES’ violations discussed above and redressing these ongoing violations will redress the Citizens’ injuries or risks.

After providing notice, Citizens are entitled to bring suit against “any person . . . who has contributed to or who is contributing to the past or present handling, storage, treatment, transportation, or disposal of any solid or hazardous waste which may present an imminent and substantial endangerment to health or the environment.”<sup>5</sup> In addition, after notice, Citizens are entitled to bring suit to prevent violations of RCRA’s prohibition of open dumping.<sup>6</sup> These citizen suit provisions also allow the recovery of reasonable attorney and expert fees in addition to other costs by prevailing plaintiffs. Therefore, Citizens may bring suit to enjoin waste disposal activities that may present an imminent and substantial endangerment to health or the environment, abate such a potential endangerment, compel compliance with the open dumping provisions, recover attorneys’ fees and costs of litigation, and obtain other appropriate relief.

In accordance with Section 7002(b)(2)(A) of RCRA,<sup>7</sup> this letter serves to notify you that unless you remedy the violations detailed in this letter, Citizens intend to file suit in federal district court any time beginning ninety (90) days after the certified receipt of this letter.<sup>8</sup>

## **I. WASTE FROM THE AES GUAYAMA PLANT CAUSED CONTAMINATION IN THE DOMINICAN REPUBLIC**

AES owns and operates the Plant, which has a capacity to generate approximately 450MW of electricity. Despite opening over ten years ago in 2002, the Plant has been rated among the dirtiest in the nation because it emits a “a disproportionate amount of toxic pollutants

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<sup>3</sup> See <http://www.agremax.com/>

<sup>4</sup> A. Dennis Lemly and Joseph P. Skorupa, Wildlife and the Coal Waste Policy Debate: Proposed Rules for Coal Waste Disposal Ignore Lessons from 45 Years of Wildlife Poisoning, 46 (16) Environ. Sci. Technol., 8595–8600 (2012)

<sup>5</sup> 42 U.S.C. § 6972(a)(1)(B).

<sup>6</sup> 42 U.S.C. § 6945(a).

<sup>7</sup> 42 U.S.C. § 6972(b)(2)(A).

<sup>8</sup> 40 C.F.R. § 254.2.

– including arsenic, chromium, hydrochloric acid, lead, mercury, nickel, and selenium.”<sup>9</sup> During the process of burning coal, the Plant generates coal ash and other waste. Initially, Puerto Rican officials required Defendants to transport and dispose of the Coal Ash Waste outside of Puerto Rico due to the serious health hazards associated with its presence.<sup>10</sup> Indeed, this off-site disposal mandate was reportedly included as a material provision in the Power Purchase Agreement entered into between AES Puerto Rico, L.P. and the Puerto Rico Electric Power Authority. *Id.* at n. 9. In fact the agreement specifies that any “waste or by-product” that “cannot be used for beneficial commercial purposes” cannot be disposed in Puerto Rico.<sup>11</sup>

As a result, from October 2003 until March 2004, Defendants dumped thousands of tons of Coal Ash Waste at the Arroyo Barril port in the Dominican Republic’s Samaná Province, which is located near the homes, workplaces, and recreational sites of many individuals. *Id.* at 2. AES represented to residents and officials of the Dominican Republic that the Waste was not a harmful substance, and that it could even be considered a “beneficial product that might be profitably utilized by the residents of Samaná as construction material.” *Id.*

In 2005, the Government of the Dominican Republic sued AES complaining that several American companies polluted Samana Bay and Manzanillo by dumping coal ash. *Gov’t of Dominican Republic v. AES Corp.*, 466 F. Supp. 2d 680, 683 (E.D. Va. 2006). More specifically, the Dominican Republic alleged that the AES conspiracy polluted Manzanillo and Samana Bay, wrecked the beach, caused nearby residents to suffer physical injuries that required the state-run healthcare system to provide medical care, hampered tourism, and caused business in the region to suffer. *Id.* at 684. In addition, it alleged that some inhabitants of the Dominican Republic have suffered respiratory problems from breathing polluted air which the state-run healthcare system has addressed. *Id.* Disposal costs for the 1000 tons of coal ash generated by the plant each day would have been substantial, approximately \$100-200 U.S. per ton. *Id.* To avoid these costs, AES created AES Aggregate Services, Ltd., a Cayman Islands subsidiary, to enter into a contract with AES Puerto Rico. *Id.* Former AES executive Sarah Slusser directed the formation of AES Aggregate Services while at AES headquarters in Arlington, Virginia. *Id.* The Dominican Republic alleged that AES used this approach to create the illusion that the Puerto Rico plant’s ash would be disposed of in accordance with relevant law. *Id.* When the initial contract between AES Puerto Rico and AES Aggregate Services to dispose of the ash in the Bahamas failed (because the Bahamas refused to accept it), AES allegedly hired Silver Spot Enterprises to dump the Waste in the Dominican Republic. *Id.*

This approach was replete with problems and alleged misconduct. Initially, the Waste was rejected due to lack of permits and Silver Spot ended up dumping the Waste in Haitian coastal waters. *Id.* at 685. Thereafter, from October 2003 to March 2004, Defendants transported ten (10) barge-loads of compacted coal ash from Puerto Rico to the Dominican Republic. *Id.* at 684. The Dominican Academy of Sciences found that the coal ash had high levels of arsenic, cadmium, nickel, beryllium, chromium, and vanadium. *Id.* Four barges left approximately 30,000 tons of coal ash in Manzanillo, exposed to the elements. *Id.* Residents of this area were exposed to coal ash dust; as a result they allegedly experienced skin lesions, and

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<sup>9</sup> <http://newsismybusiness.com/guayama-energy-plant-named-among-%E2%80%98dirtiest%E2%80%99-in-nation/>

<sup>10</sup> *Pallano v. AES Corporation, C.A.*, Nos. N09C-11-021 JRJ, Consolidated, N10C-04-054 JRJ Superior Court of Delaware, 2011 WL 2803365 (July 15, 2011)

<sup>11</sup> <http://www.utier.org/documentos/contratos/aes.pdf> at 22

several elderly residents and children had difficulty breathing. *Id.* Several residents were hospitalized. Allegedly, the dumping contributed to, or resulted in, six (6) deaths and five (5) serious illnesses. *Id.* Samana Bay allegedly also suffered major damage from the coal ash pollution. Again, several residents were allegedly injured, suffering skin lesions and breathing difficulties. *Id.* Six (6) residents were allegedly hospitalized with acute respiratory distress. *Id.*

The owner of Silver Spot allegedly twice attempted to bribe local Dominican officials to get permits to dispose of the Waste. *Id.* at 685-86. Silver Spot allegedly tried to intimidate a District Attorney in the Dominican Republic, in part by burning his car and causing him to be fired from his job. *Id.* at 686. The Dominican Republic alleged that AES Puerto Rico paid bribes to Dominican Republic government officials when AES executives, Al Dyer and David Stone, traveled to the Dominican Republic. *Id.* Importantly, in that litigation AES obtained dismissal of a product liability claim against it, because it claimed that the Waste was not a product. *Id.* at 693.

Despite the representations that the Waste was beneficial, on February 28, 2007, the Government of the Dominican Republic settled this case for \$6M in damages, a clean up of the area, and an agreement from AES not to dump further Waste in that country. In the settlement the government withdrew its allegations regarding bribery, toxicity of the Waste, violation of laws, and other misconduct. Residents of the Dominican Republic are bringing a separate lawsuit seeking damages for various health problems. *Id.*

## II. RCRA VIOLATIONS

Before disposing of the Waste in the Dominican Republic, AES also pursued a parallel track in Puerto Rico. In 1996 it represented to the Puerto Rican Environmental Quality Board that the Waste was in fact a soil amendment product and obtained two Board resolutions that determined that the normal solid waste regulations did not apply.<sup>12</sup> However, the by-product described in R-96-39-1 is different from the Waste actually disposed. According to resolution R-96-39-1, the Waste was going to be compacted into a cement-like product, but the photographs show that the Waste does not have the consistency of cement.<sup>13</sup>

As discussed in more detail below, since 2004 over two million tons of the Waste have been used as fill in various projects in Puerto Rico, including housing developments and road projects.<sup>14</sup> In addition, it has been left in piles at various locations. The Waste contains heavy metals at levels that are far in excess of background for the area and may present an imminent and substantial endangerment to human health and the environment. In addition, the Waste contains radioactive isotopes of potassium and radium that are far in excess of background for the area and may present an imminent and substantial endangerment to human health and the environment. Finally, the Waste contains hexavalent chromium at levels that are far in excess of background for the area and that could leach into groundwater, leading to an imminent and substantial endangerment to human health and the environment. As such, it must be disposed in a carefully controlled manner that avoids contact with people and the environment. The current

<sup>12</sup> Puerto Rico Environmental Quality Board 96-9-1, 96-39-1, available at <http://www.agremax.com/Downloads/R-00-96-2%20ENGLISH.pdf>, and 00-14-2 available at <http://www.agremax.com/Downloads/R-00-14-2%20ENGLISH.pdf>

<sup>13</sup> R. 96-39-1 at 2.

<sup>14</sup> Letter from AEA to the Puerto Rico Environmental Quality Board, dated May 18, 2012.

disposal practices violate federal law. AES must therefore stop disposing of the Waste in this manner and must clean up the Waste that has been dumped without any effective isolation from the environment.

#### **A. Agremax and Coal Ash Are Solid Waste**

Although AES has nominally obtained an exemption from State regulation of waste disposal, its Waste disposal activities are not exempt from RCRA. Furthermore, there is little doubt that the claim of beneficial use is merely a smokescreen that AES is using to dispose of Waste without proper controls. Multiple factors point in this direction. First, EPA has stated in its proposed rule on the disposal of coal ash that ". . .situations where large quantities of [coal combustion residues] have been used indiscriminately as unencapsulated general fill. . .the Agency does not consider this a beneficial use. . .but rather considers it waste management" (75 Fed Reg. 35,154)." Letter from J. Enck, EPA Region 2, Regional Administrator to Chairman Pedro Nieves Miranda, Commonwealth of Puerto Rico, dated November 11, 2011. The letter continues:

Our concerns regarding EQB's Resolutions are thus threefold:

- 1) In several states in which similar "beneficial use determinations" are in effect, a regulatory framework exists to define such use, establish engineering controls, and limit adverse environmental impacts. For example, Wisconsin prohibits "... use of industrial byproducts as paved roadway subbase or base fill ...." in residential areas. Rhode Island requires that "....end uses involving land application [of recycled product]. . .shall be ,... subject to heightened scrutiny as to whether the use constitutes beneficial reuse or is simply an alternative means of disposal." Our understanding is that no such provisions were ever established by EQB [Environmental Quality Board] for Agremax.
- 2) We have inspected ten sites in the municipalities of Arroyo, Guayama, and Salinas, where Agremax has been placed on the land, including residential areas and areas close to wetlands and surface water. *It is our observation, based on these inspections and subsequent investigation, that the land placement of Agremax may constitute disposal at several of the sites inspected.* The volumes observed placed on the land in some cases appeared to far exceed those we would consider necessary for the appropriate engineering use of the construction material for which Agremax was allegedly being substituted. In addition, several of the Agremax land placement sites appeared to have been abandoned, in that, despite the presence of signs indicating construction permit issuance, the slated construction projects had not been initiated and no construction equipment or activity was noted, while several sites appeared overgrown and had been used for the illegal deposition of waste materials.

3) The locations at which some of the deposition of Agremax has taken place overlies shallow sole source drinking water aquifers, and are thus particularly sensitive to environmental harm. A 2007 EPA report documents known damage cases from the mismanagement of coal ash in unlined landfills and surface impoundments and the subsequent contamination of drinking water aquifers through the leaching and ground water transport of contaminants in the ash. Two EPA Orders, issued in 2003 and 2004 under the Comprehensive Environmental Response, Compensation, and Liability Act, and a subsequent 2004 citizen suit taken under Section 7002 of the Resource Conservation and Recovery Act, address aquifer contamination by the leaching of toxic constituents from an unlined coal ash landfill in Pines, Indiana. The EPA proposed rule states that: ". . . EPA recognizes that seven proven damage cases involving the large scale placement, akin to disposal, of [coal combustion residues] has occurred under the guise of "beneficial use". . ." and that ". . . therefore, today's proposed rule explicitly removes these types of uses from the category of beneficial use.. ." (75 F.R. 35 161).

*Id.* (emphasis added).<sup>15</sup>

Second, AES is closely following the approach it previously took in the Dominican Republic, where its attempts to represent that the Waste was in fact a beneficial product were thwarted by litigation. Third, in that litigation, AES defeated product liability claims by alleging that the Waste was not in fact a product. Fourth, this approach of pretending that toxic waste is useful fill material has been one of the standard tactics of those who produce such waste and has resulted in harm to public health and the environment, as well as extremely costly clean ups, in many locations. For example, in Jersey City, NJ, three local producers of chromium routinely gave away chrome ore residues as fill, resulting in widespread exposure to hexavalent chromium and hundreds of millions of dollars of cleanup costs and elevated cancer rates in the area.<sup>16</sup>

## **B. Locations of the Waste**

Appendix A to this letter provides the approximate co-ordinates of known location of 36 places where the Waste that has been disposed to date. Appendix A also includes photographs of some of these sites. Appendix B provides maps showing those locations. As discussed in the EPA letter, these locations vary considerably. Some places where the Waste has been used are new developments where the waste provides fill to raise sites above flood levels. Others are road projects where the Waste is used as base fill. Yet others are just places where Waste has been apparently abandoned. None of these locations are designed to prevent the Waste coming into contact with the environment. Indeed, photographs attached show the Waste in rivers and

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<sup>15</sup> As an example of one of the disposal locations identified, an EPA inspector found that an access road adjacent to Pfizer Guayama plant is "far more extensive (wider, higher) than appropriate for stated end use." Field Notes taken by L Grossman of EPA.

<sup>16</sup> See e.g. <http://www.jerseycitylawsuit.com/wp-content/uploads/chromium-contaminated-sites-summary.pdf>

exposed on roads and in abandoned piles. Other pictures in Appendix A show children and animals close to exposed Waste.

### **C. Waste May Present an Imminent and Substantial Endangerment**

After providing notice, Citizens are entitled to bring suit against “any person . . . who has contributed to or who is contributing to the past or present handling, storage, treatment, transportation, or disposal of any solid or hazardous waste which may present an imminent and substantial endangerment to health or the environment.”<sup>17</sup> To show such a potential endangerment, Plaintiffs must show that “there is some reasonable cause for concern that someone or something may be exposed to a risk of harm.” *Interfaith Community Organization v. Honeywell International, Inc.*, 399 F. 3d 248, 259 (3d Cir. 2005).

Here Defendant’s own studies show that the elevated levels of arsenic, beryllium, mercury, potassium (K-40) and radium (Ra-226) in the Waste may present such an endangerment.<sup>18</sup> In addition, analysis by an independent laboratory shows that the levels of boron, molybdenum, and selenium may present such an endangerment.<sup>19</sup>

With regard to health risks, arsenic causes lung and skin irritation, cancer, and even death in high doses.<sup>20</sup> Children and unborn babies are particularly vulnerable to the effects of arsenic. Beryllium is another known human carcinogen that causes harm to the lungs.<sup>21</sup> Potassium-40 is a source of both alpha and gamma radioactivity. Ingestion of this isotope causes a cancer risk.<sup>22</sup> Radium-226 is primarily a source of alpha radioactivity. Ingestion of this isotope causes a cancer risk, in part because it acts like calcium and can be deposited in bones.<sup>23</sup>

With regard to the heavy metals, the measured level of arsenic in the Waste is 39 mg/kg, which is over six times the local background level of between 3.2 and 6 mg/kg.<sup>24</sup> The measured level of beryllium in the Waste is 2.3 mg/kg, which is approximately twice the local background level of between 1.1 and 1.3 mg/kg. The measured level of boron in the Waste is 140 mg/kg, which is over ten times the local average background level of 12.9 mg/kg. The measured level of mercury in the Waste is 0.64 mg/kg, which is over five times the local background level of between 0.098 and 0.12 mg/kg. The measured level of molybdenum in the Waste is 8.7 mg/kg, which is over four times the local average background level of 2.1 mg/kg. Finally, the measured level of selenium in the Waste is 19 mg/kg, which is approximately fourteen times the local average background level of 1.3 mg/kg.

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<sup>17</sup> 42 U.S.C. § 6972(a)(1)(B).

<sup>18</sup> Letter from Allen B. Dyer, President AES Puerto Rico to EQB, dated March 25, 2001 (“Dyer Letter”).

<sup>19</sup> Independent laboratory tests conducted by TestAmerica and background levels for these metals taken from ATSDR Study available at [http://www.atsdr.cdc.gov/HAC/PHA/reports/isladevieques\\_02072003pr/tables.html#T2](http://www.atsdr.cdc.gov/HAC/PHA/reports/isladevieques_02072003pr/tables.html#T2)

<sup>20</sup> <http://www.atsdr.cdc.gov/toxfaqs/tf.asp?id=19&tid=3>

<sup>21</sup> <http://www.atsdr.cdc.gov/toxfaqs/tf.asp?id=184&tid=33>

<sup>22</sup> <http://www.ead.anl.gov/pub/doc/potassium.pdf>

<sup>23</sup> <http://www.ead.anl.gov/pub/doc/radium.pdf>

<sup>24</sup> For metals where AES data is available, levels of heavy metals and background concentrations are provided at Figure 4 and Table 4 of the Dyer Letter.

With regard to human health risks, using standard residential assumptions, a one-in-a-million lifetime cancer risk is caused by an arsenic level of 0.4 mg/kg. Thus, even at background levels, lifetime cancer risks from arsenic are approximately one in 100,000, which is 10 times EPA's standard remediation goal. The Waste contains arsenic at approximately 100 times this level. Adding the Waste to the residential soils will increase this risk to approximately 1-in-1,000 lifetime cancer risk, which would be sufficient to trigger the need to remediate the affected property. Under the same assumptions, the lifetime cancer risk caused by the beryllium in the Waste is approximately two in a million. Therefore, the levels of these heavy metals in the Waste may present an imminent and substantial endangerment to human health, but as discussed below, this is far from the only human health risk associated with the Waste.

With regard to ecological risks, arsenic levels of 10 mg/kg and above are toxic to certain plants. The arsenic levels in the Waste are approximately four times this level. Therefore, adding the Waste to soils is likely to induce plant toxicity due to elevated arsenic levels. In addition, in freshwater, arsenic causes ecological damage above 6 mg/kg. The levels of arsenic in the Waste are over six times this level. Therefore, when the Waste gets into streams it is harmful due to elevated arsenic. Boron is toxic to plants at a level of 0.5 mg/kg. The boron levels in the Waste are approximately 280 times this level. Therefore, adding the Waste to soils is highly likely to induce plant toxicity due to elevated boron levels. Molybdenum is toxic to plants at a level of 2 mg/kg. The molybdenum levels in the Waste are approximately four times this level. Therefore, adding the Waste to soils is likely to induce plant toxicity due to elevated molybdenum levels. Turning to mercury, EPA Region 5 uses an ecological screening level for mercury of 0.1 mg/kg and some studies show certain birds are sensitive to mercury below this level. In addition, mercury is toxic to plants at a level of 0.3 mg/kg. The mercury levels in the Waste are two to six times greater than the levels at which ecological damage can occur. Therefore, adding the Waste to soils could cause ecological damage due to elevated mercury. In addition, in freshwater, mercury causes ecological damage above 0.2 mg/kg. The levels of mercury in the Waste are over three times this level. Therefore, if the Waste gets into streams it would be harmful due to elevated mercury. Selenium is toxic to wildlife at a level of 0.21 mg/kg. The selenium levels in the Waste are approximately 90 times this level. Therefore, adding the Waste to soils is highly likely cause harm to wildlife due to elevated selenium levels.

In addition to the potential endangerment caused by arsenic, beryllium, boron, mercury, molybdenum, mercury, and selenium in the Waste, the radioactive isotopes of potassium (K-40) and radium (Ra-226) also cause a potential endangerment due to human health risks. The Preliminary Remediation Goals set for these substances are as follows:<sup>25</sup>

Residential Soil – K-40 0.108 pCi/g, Ra-226 0.193 pCi/g

Agricultural Soil – K-40 0.0445 pCi/g, Ra-226 0.000676 pCi/g

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<sup>25</sup> Extracted from [http://epa-prgs.ornl.gov/radionuclides/download/rad\\_master\\_prg\\_table\\_pci.pdf](http://epa-prgs.ornl.gov/radionuclides/download/rad_master_prg_table_pci.pdf)



These levels are based on a cancer risk factor of one in a million over a 70 year lifetime.<sup>26</sup> The levels for agricultural use are lower because the isotopes tend to concentrate in plants. The average level of K-40 in the Waste is 6.4 pCi/g.<sup>27</sup> This creates a cancer risk of greater than one in ten thousand in residential soil and greater than one in a thousand in agricultural soil. The average level of Ra-226 in the Waste is 2 pCi/g. This creates a cancer risk of greater than one in ten thousand in residential soil and greater than one in a hundred in agricultural soil. These levels are far higher than EPA remediation goals and therefore may present an imminent and substantial endangerment to human health.

Finally, in addition to the potential endangerment caused by arsenic, beryllium, mercury, and radionuclides in the Waste, the levels of hexavalent chromium in Waste also cause a potential endangerment. According to the TCLP test, 0.1 mg/L (0.1 ppm) of total chromium leaches from the Waste.<sup>28</sup> A safe level of drinking water for hexavalent chromium is approximately 20 ppt.<sup>29</sup> Because hexavalent chromium is far more soluble than the other forms likely to be present in the waste, most, if not all, of the total chromium observed in the TCLP test is hexavalent chromium. Furthermore, there are a number of studies indicating that the TCLP test underestimates the actual potential for leaching from the Waste. Therefore, it is conservative to assume that 0.1 ppm (100,000 ppt) of hexavalent chromium could leach from the Waste. This is 5,000 times greater than the concentration at which cancer risks exceed one in a million. Therefore, there is a strong potential for the Waste to contaminate groundwater. At present, the population of many of the areas in which the Waste is disposed rely upon groundwater to supply them with drinking water. The maps in Appendix B show that many of the disposal sites are near drinking water wells. Therefore, the level of leachable hexavalent chromium in the Waste may present an imminent and substantial endangerment to human health.

#### **D. Waste Disposal Practices Violate the Open Dumping Requirements**

RCRA prohibits open dumping and provides that a citizen suit may be brought to prevent open dumping:

[A]ny solid waste management practice or disposal of solid waste or hazardous waste which constitutes the open dumping of solid waste or hazardous waste is prohibited, except in the case of any practice or disposal of solid waste under a timetable or schedule for compliance established under this section. The prohibition contained in the preceding sentence shall be enforceable under section 6972 of this title [the citizen suit provision] against persons engaged in the act of open dumping.

42 U.S.C. § 6945(a).

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<sup>26</sup> See <http://epa-prgs.ornl.gov/radionuclides/>

<sup>27</sup> Dyer Letter at 4.

<sup>28</sup> Dyer Letter at Table 2.

<sup>29</sup> See <http://www.acwa.com/content/chromium-6>

Under RCRA, an “open dump” is defined as “any facility or site where solid waste is disposed of which is not a sanitary landfill which meets the criteria promulgated under section 6944 of this title [40 C.F.R. § 257] and which is not a facility for disposal of hazardous waste.” 42 U.S.C. § 6903(14). In turn, in the regulations, open dumps are defined as facilities that do not comply with the regulations, whereas sanitary landfills are defined as those that do comply with the regulations. 40 C.F.R. § 257.2.

In the case of waste disposal into flood plains, the regulations state:

Solid waste disposal facilities or practices which violate any of the following criteria pose a reasonable probability of adverse effects on health or the environment:

§ 257.3-1 Floodplains.

(a) Facilities or practices in floodplains shall not restrict the flow of the base flood, reduce the temporary water storage capacity of the floodplain, or result in washout of solid waste, so as to pose a hazard to human life, wildlife, or land or water resources.

(b) As used in this section:

(1) Base flood means a flood that has a 1 percent or greater chance of recurring in any year or a flood of a magnitude equaled or exceeded once in 100 years on the average over a significantly long period.

(2) Floodplain means the lowland and relatively flat areas adjoining inland and coastal waters, including flood-prone areas of offshore islands, which are inundated by the base flood.

(3) Washout means the carrying away of solid waste by waters of the base flood.

40 C.F.R. § 257.3.

As shown on the maps in Appendix B, the Waste at Sites 3, 4, 10 to 17, 24 to 27, and 32 has been placed within hundred year flood plain. Furthermore, as shown above some of the Waste has already washed out into local watercourses and the Waste is toxic to certain organisms due to elevated levels of arsenic and mercury. Thus, the disposal practices for the Waste violate the RCRA’s prohibition on open dumping.

### III. CONCLUSION

AES has violated, is currently violating, and will continue to violate the Resource Conservation and Recovery Act by disposing of the waste in the current manner. Accordingly, unless these violations are corrected, Citizens intend to file suit to enjoin and abate the violations

described above, ensure future compliance with federal law, obtain civil penalties, recover attorneys' fees and costs of litigation, and obtain other appropriate relief.

If you have any questions regarding the allegations in this notice or believe any of the foregoing information may be in error, please contact Richard Webster at the number listed below. In the absence of any questions, we would also welcome an opportunity to discuss a resolution of this matter prior to the initiation of litigation if you are prepared to remedy the violations noticed above within a reasonable time.

Sincerely,

/s

Richard Webster, Esq.\*  
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*Via Certified Mail, Return Receipt Requested*

## **Appendix A - Locations and Photographs of AES Coal Ash Waste Disposal Sites in and Around Guayama, Puerto Rico**

- Site 1: Rural Route PR-713 Km 3.3 Cimarrona Ward, Guayama, PR
  - Latitude/Longitude: 17.99616231, -66.18183374
  - Sites 1 and 2 are two large adjacent parcels in which AES coal ash is being used to fill or build interior roads to provide access to all parts of the lots.
  - Note that AES coal ash was poured over unlined soil and is being covered by a thin layer of dirt. Also, some photos show how coal ash was deposited over the Seco River and was washed out by the river.
  - A Cimarrona community member was interviewed by a local TV reporter (Maritza Cañizares from WAPA) who alleged that several members of the community have been affected by the AES coal ash dust generated by the project and stated that respiratory illness among residents has increased considerably.
- Site 2: Rural Route PR-7707 Km 3.1 Pozo Hondo Ward, Guayama, PR
  - Latitude/Longitude: 17.98544783, -66.15840197
- Site 3: Rural Route PR-3 Km 142 Pozo Hondo and Jobos Ward, Guayama, PR
  - Latitude/Longitude: 17.96057754, -66.13589823
  - Site 3 consists of construction of a new bridge over the Guamaní River to replace an existing old one using AES coal ash as base fill over which a section of approximately 200 meters of State Road PR-3 will be built after the bridge in order to improve the existing sharp turn. This project is being built by the Puerto Rico Roads Authority (Autoridad de Carreteras de Puerto Rico).
  - This project has no construction sign as required by local regulation.
- Site 4
  - Latitude/Longitude: 17.98331, -66.293614
- Site 5
  - Latitude/Longitude: 17.972257, -66.283796
- Site 6
  - Latitude/Longitude: 17.971007, -66.218771
- Site 7
  - Latitude/Longitude: 17.978111, -66.179972
- Site 8
  - Latitude/Longitude: 17.986556, -66.143639
- Site 9: Urb. Parque Gabriela II, Route 1, intersection Route 180
  - North of Coco III public supply water well.
  - Latitude/Longitude: 17.98361, -66.28509
  - Lambert Coordinates: x-215974,y-217750
- Site 10: Porto Fino Plaza, Route 3 Km. 158.4
  - Estimated lat/long: 17.972674, -66.292461

- Site 11: Porto Bello, PR 180, Intersection Manuel Gonzalez Road
  - Close to La Margarita public supply water well.
  - 2007690554JPU Lambert X -232506, Lambert Y 216592
  - Estimated lat/long: 17.970564, -66.294215
- Site 12: Arboleda Shopping Court
  - Estimated lat/long: 17.973803, -66.292255
- Site 13: Urb. Marbella, Matabuey (Julio Llera Morales) Road, Route 3, Km. 157.9
  - Just north of many domestic water wells.
  - Lambert Coordinates: x-215532, y-214603
  - Estimated lat/long: 17.965657, -66.287251
- Site 14: Urb. Valles de Salinas, Matabuey (Julio Llera Morales) Road, Route 3 Km. 157.9
  - x-215219, y-215300
  - Estimated lat/long: 17.967473, -66.286838
- Site 15: Urb. Vistas de Salinas, Matabuey (Julio Llera Morales) Road, Route 3 Km. 157.9
  - 17.96865, -66.28527
  - Lambert Coordinates: x-215572, y-214903
- Site 16: Urb. Brisas de Evelynmar, Matabuey (Julio Llera Morales) Road, Route 3 Km. 157.9
  - x- 215599, y-215185
  - Estimated lat/long: 17.969319, -66.286194
- Site 17: Matabuey (Julio Llera Morales) Road, between Route 3 and Villa Sol Street
  - Estimated lat/long: 17.968117, -66.285343
- Site 18: Route 705, intersection Route 3, Aguirre Sector
  - Estimated lat/long: 17.965155, -66.227062
- Site 19: Salinas Municipal Landfill, Route 703
  - Estimated lat/long: 17.957248, -66.236661
- Site 20: Access Road, parallel to Route 706 between Routes 3 and 53
  - North of San Felipe public supply water well.
  - Estimated lat/long: 17.976876, -66.218503
- Site 21: Santa Paula Oil project site, Route 706, intersection Route 53
  - Estimated lat/long: 17.994674, -66.219989
- Site 22: Route 706, Ranchos Guayama Sector, between Route 53 north to community exit
  - Estimated lat/long: 18.05172, -66.208109
- Site 23: Los Recreos Plaza, Route 53, km 138 and access road up to Route 15
  - 17.98143, -66.12625
- Site 24: Urb.Estancias de Dulces Suenos, access through Route 53, km 138
  - Sinking, mostly abandoned, built on wetlands.

- Lambert: x- 233039, y-217435
  - Estimated lat/long: 17.994735, -66.116781
- Site 25: Urb. Ext. Los Recreos, Route 53 km 138.6 and Pozo Hondo Road
  - Estimated lat/long: 17.977295, -66.127369
- Site 26: Arpe Building, Los Paseos Road, close to Route 54(53) (Angel Figueroa Bldg.)
  - Estimated lat/long: 17.978024, -66.119979
- Site 27: AES well field site, Melania Road, intersection Route 3, between km 141.5 and Km.140.6 in Bo. Machete (Ward)
  - Close to Guamani River
  - Estimated lat/long: 17.966539, -66.138152
- Site 28: Pozo Hondo Road including access to Guayama Landfill
  - Estimated lat/long: 17.985092, -66.141181
- Site 29: Route 713, between Routes 3 and 53, Villodas Sector
  - Estimated lat/long: 17.985092, -66.181323
- Site 30: Urb. Mar del Caribe, Route 713
  - Close to Seco River
  - Estimated lat/long: 17.981136, -66.179708
- Site 31: Cora Colony access road, south of Route 3, Km\_
  - Estimated lat/long: 17.964195, -66.178577
- Site 32: Cemex access road, south of Route 3, Km\_
  - Estimated lat/long: 17.96504, -66.180556
- Site 33: Arroyo Town Center, Route 3, km. 130.3, Cuatro Calles Ward
  - Near 3 public supply water wells
  - Lambert Coordinates x- 239899, y- 215100
  - Estimated lat/long: 17.97202, -66.052953
- Site 34: Eta Sigma Alpha Fraternity, Route 3 km 129
  - Close to Punta Guilarte Public Beach and adjoining lot
  - Near 3 public supply water wells
  - Estimated lat/long: 17.976514, -66.041767
- Site 35: Route 3, km.128.4
  - Near 3 public supply water wells
  - Estimated lat/long: 17.981316, -66.035184
- Site 36: Cayure Sector Road, access through Urb. Villa Serena
  - Estimated lat/long: 18.009282, -66.380245

## **Photographs of Disposal Sites**

### **Site 1**

Figure 1.1 Portion of the road showing how the AES coal ash is covered with a thin layer of dirt.

Figure 1.2 New section of the road built with AES coal ash.

Figure 1.3 AES coal ash poured across the Seco River and washed out by the river



Figure 1.4 A section of the river on the north side of the road showing AES coal ash in the water.

Figure 1.5 The portion of the Seco River to the south of the road containg AES coal ash.

## **Site 2**

Figure 2.1 Road section with exposed AES coal ash

Figure 2.2 Residues of AES coal ash spilled on the side of the road.

Figure 2.3 A finished section of the road built with AES coal ash.

### **Site 3**

Figure 3.1 Partial view of the bridge built over the Guamaní River – south to north with AES coal ash visible in the riverbed.

Figure 3.2 AES coal ash used as base fill.

Figure 3.3 A layer of concrete dust poured over the AES coal ash

Figure 3.4 AES coal ash residues drain into the stormwater system

Figure 3.5 View of the storm culvert

Figure 3.6 Outlet of the storm culvert

**Photographs of Other Coal Ash Disposal Sites:**



## APPENDIX B

### MAPS SHOWING COAL ASH DISPOSAL LOCATIONS











